

Patent
Attorney's Docket No. 0904-013

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)
Björn CRONA) Group Art Unit: 2628
Application No.: 10/587,803) Examiner: Phi Hoang
Filed: July 31, 2006) Confirmation No.: 5205
For: METHOD AND DEVICE FOR)
CREATING PATTERNS FOR)
BEAD-INLAID PLATES)

AMENDED APPEAL BRIEF PURSUANT TO 37 C.F.R § 41.37

Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

In response to the Notification of Non-Compliant Appeal Brief (“Notification”) mailed 07/19/2010 and in connection with the above-identified application, submitted herewith is the Amended Appeal Brief.

As identified in the Notification, the summary of claimed subject matter has been amended to more distinctly map out independent claim 4. Title headings for the Evidence Appendix and Related Proceedings Appendix have now been included.

(i) **REAL PARTY IN INTEREST**

The real party in interest is the assignee, Munkplast International AB.

(ii) **RELATED APPEALS AND INTERFERENCES**

To the best of the undersigned's knowledge, there are no related appeals or interferences.

(iii) **STATUS OF CLAIMS**

Claims 1-10 are currently pending, have all been rejected two or more times, and are all the subject of this appeal.

(iv) **STATUS OF AMENDMENTS**

No Amendments have been submitted in this application subsequent to the Final Office Action dated February 3, 2010.

(v) **SUMMARY OF CLAIMED SUBJECT MATTER**

Bead-inlaid plates are laid using artificial resin beads, also called tube beads, which comprise short, thick-walled cylindrical tube pieces of different colors. Such bead-inlaid plates can be laid in patterns to form various motifs. Conventionally, computer programs and associated machinery were known which would take an input picture, convert the picture to an electronic format, and use the information provided to automatically place beads on a base to create a bead-inlaid plate. Although such were quick and cheap because they were completely automated, they were also inflexible. According to exemplary embodiments of the present invention, interactive methods and devices for creating patterns for bead-inlaid plates are described. Such interactive methods use a computer and/or associated software as an aid in designing bead-inlaid plate patterns, but also provide a user or designer with the flexibility to adjust the designs, e.g., by selecting formats and/or selecting individual colors or patterns of colors prior to generating the patterns to be used to create the bead-inlaid plates. Indeed the usefulness and public interest associated with exemplary embodiments of the present invention can be seen, e.g., at <http://www.photopearls.se/newsroom/>.

According to exemplary embodiments, and as set forth in independent claim 1, a method of creating a pattern for a bead-inlaid plate using a computer, comprises a number of steps including: providing a colour picture (see, e.g., page 2, line 32 of the present specification), converting the colour picture to a digital image file suited for

electronic processing (see, e.g., page 2, line 32- page 3, line1 of the present specification), showing on a monitor associated with the computer the picture that corresponds to the digital image file (see, e.g., page 3, lines 5-7, and Figure 7, step 103 of the present specification), selecting on the monitor, using a user input device of the computer, an area of the shown picture for which a pattern is to be created (see, e.g., page 3, lines 8-21 and Figure 7, step 105 of the present specification), selecting a format of a bead-inlaid plate (see, e.g., page 3, lines 22-31 and Figure 7, step 105 of the present specification), dividing the selected area of the shown picture into a grid of intersecting lines including squares of a uniform size, each of said squares corresponding to a bead on the bead-inlaid plate, so that the grid of intersecting lines also corresponds to the selected format (see, e.g., page 3, line 32-page 4, line 2 and Figure 7, step 115 of the present specification), determining according to a predetermined algorithm for each square that colour among colours available for beads which best represents or agrees with the colour of the square (see, e.g., page 4, lines 2-8 and Figure 7, step 119 of the present specification), showing on the monitor a picture of the selected area including the colour determined for the square in each square (see, e.g., page 4, lines 8-13 and Figure 7, step 121 of the present specification), changing on the monitor, using a user input device of the computer, at least one colour quantity for the picture of the selected area and/or changing the colour in individual squares (see, e.g., page 4, lines 22-34 and Figure 7, steps 125 and 127 of the present specification), and finally printing a pattern including the selected colours for the bead-inlaid plate (see,

e.g., page 5, lines 16-21 and Figure 7, steps 141, 143 of the present specification).

According to another exemplary embodiment, and as set forth in independent claim 4, a device for forming a pattern for a bead-inlaid plate, includes a computer (see, e.g., page 3, line 2 and computer 3 in Figure 8) including a receiving device (see, e.g., page 3, line 4 and unit 13 in Figure 8) for a digital image file suited for electronic processing, the computer including a unit (see, e.g., page 3, line 5 and unit 15 in Figure 8) for showing on the monitor (see, e.g., page 3, line 3 and monitor 5 in Figure 8) associated with the computer the picture that corresponds to the digital image file, a unit (see, e.g., see page 3, line 9 and unit 21 in Figure 8) for selecting on the monitor, using one of the user input devices of the computer, an area of the shown picture for which a pattern is to be formed, a unit (see, e.g., page 3, line 26 and unit 39 in Figure 8) for selecting a format of a bead-inlaid plate, a unit (see, e.g., page 4, line 2 and unit 49 in Figure 8) for dividing the selected area in the shown picture in a grid of intersecting lines including squares of a uniform size which each correspond to a bead on the bead-inlaid plate, so that the grid of intersecting lines also correspond to the selected format, a unit (see, e.g., page 4, line 4 and unit 51 in Figure 8) for determining, according to a predetermined algorithm, for each square that colour hue among colour hues available for the beads which best represents or agrees with the colour hue in the square, a unit (see, e.g., page 4, line 9 and unit 53 in Figure 8) for showing on the monitor a picture of the selected area including the colour determined for each square in

each square, a unit (see, e.g., page 4, line 9 and unit 58 in Figure 8) for selecting on the monitor, using a user input device of the computer, at least one colour quantity for the picture of the selected area and/or changing the colours in individual squares, and a unit (see, e.g., page 5, line 13 and unit 91 in Figure 8) for finally printing a pattern including the selected colours for the bead-inlaid plate.

According to another exemplary embodiment, as set forth in independent claim 6, an interactive method for creating a pattern for a bead-inlaid plate using a computer includes the steps of converting a color picture to a digital image file which is suitable for electronic processing (see, e.g., page 2, line 32- page 3, line1 of the present specification), displaying, on a monitor associated with the computer, a picture that corresponds to the digital image file (see, e.g., page 3, lines 5-7, and Figure 7, step 103 of the present specification); selecting, on the monitor using a user input device of the computer, an area of the displayed picture for which a pattern is to be created (see, e.g., page 3, lines 8-21 and Figure 7, step 105 of the present specification), selecting a format of a bead-inlaid plate (see, e.g., page 3, lines 22-31 and Figure 7, step 105 of the present specification); dividing the selected area of the displayed picture into a grid of intersecting lines including squares of a uniform size, each of said squares corresponding to a bead on the bead-inlaid plate, so that the grid of intersecting lines also corresponds to the selected format (see, e.g., page 3, line 32-page 4, line 2 and Figure 7, step 115 of the present specification), identifying, for each of said squares, a color among those colors available for beads, which best represents a color of the

square (see, e.g., page 4, lines 2-8 and Figure 7, step 119 of the present specification), displaying, on the monitor, a picture of the selected area including the colour determined for the square in each square (see, e.g., page 4, lines 8-13 and Figure 7, step 121 of the present specification), modifying, on the monitor using a user input device of the computer, at least one of: a color attribute associated with the picture of the selected area and the color in an individual square (see, e.g., page 4, lines 22-34 and Figure 7, steps 125 and 127 of the present specification), and printing a pattern including the selected colors for the bead-inlaid plate(see, e.g., page 5, lines 16-21 and Figure 7, steps 141, 143 of the present specification).

(vi) **GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

A number of grounds of rejection are raised by the Examiner and listed below.

Appellant requests review of each of these grounds of rejection on appeal.

- a. Claims 1, 2, and 4-8 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Morito (U.S. Patent Number 6,003,577) in view of Korytar (Artopik).¹
- b. Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Morito (U.S. Patent Number 6,003,577) in view of Korytar (Artopik) and further in view of Braun et al. (U.S. Patent Publication 2005/0089247 A1).
- c. Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Morito (U.S. Patent Number 6,003,577) in view of Korytar (Artopik) and further in view of Niki (U.S. Patent Publication 2003/0050873).
- d. Claim 10 stands rejected under 35 U.S.C. § 112 as being allegedly indefinite.

¹ On page 4 of the Final Office Action, in paragraph number 2, it is stated that "Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Morito (U.S. Patent Number 6,003,577) in view of Korytar (Artopik)." However it is believed by the undersigned that this is a typographical error since claims 3 and 9 do not subsequently have their own independent reasons to support this rejection (which the other claims do) and claims 3 and 9 are later rejected over other combinations of references.

(vii) **ARGUMENT**

Bead-inlaid plates are laid using artificial resin beads, also called tube beads, which comprise short, thick-walled cylindrical tube pieces of different colors. Such bead-inlaid plates can be laid in patterns to form various motifs. Conventionally, computer programs and associated machinery were known which would take an input picture, convert the picture to an electronic format, and use the information provided to automatically place beads on a base to create a bead-inlaid plate. Although such were quick and cheap because they were completely automated, they were also inflexible.

According to exemplary embodiments of the present invention, interactive methods and devices for creating patterns for bead-inlaid plates are described. Such interactive methods use a computer and/or associated software as an aid in designing bead-inlaid plate patterns, but also provide a user or designer with the flexibility to adjust the designs, e.g., by selecting formats and/or selecting individual colors or patterns of colors, prior to generating the patterns to be used to create the bead-inlaid plates. Indeed the usefulness and public interest associated with exemplary embodiments of the present invention can be seen, e.g., at
<http://www.photopearls.se/newsroom/>.

The cited, primary reference (U.S. Patent No. 6,003,577 to Morito) corresponds to the European patent application 0 829 378 which is discussed in the Background section of the present specification and is, thus, precisely the type of automated system which is intended to be improved upon by the exemplary embodiments of the present

invention. More specifically, the primary reference to Morito describes an automated process for manufacturing a bead-inlaid plate or picture, which fails to provide the flexibility of the interactive methods and systems which are described and claimed in the present application. In fact, Morito is clearly most concerned with automating the process as stated, for example, in the Abstract:

“[a] bead-inlaid picture can be manufactured just in accordance with the original image at high quality and at a reduced cost quite automatically **without requiring any particular skill.**” (emphasis added)

Since Morito is concerned with providing an automatic process and system which does not require any “particular skill”, it is not surprising that Morito therefore fails to teach or suggest various features of the claimed combinations which provide the interactive nature of bead-inlaid pattern generation according to exemplary embodiments. These deficiencies, and the manner in which the secondary and tertiary references fail to address them, are described below in detail.

1. Neither Morito Nor Korytar (Artopik), Taken Singly or In Combination, Are Even Alleged to Teach All of the Features of Appellant's Claimed Combinations

Independent claim 1 has ten steps. Initially, it is interesting to note that the primary reference to Morito is only even alleged to disclose four of those ten steps, (i.e., providing..., converting..., dividing...and determining...). See numbered paragraph 3 of the Final Official Action bridging pages 4 and 5. While this fact is certainly not

dispositive of the Graham v. John Deere inquiry into patentability, it is also respectfully submitted to be a factual situation which is at least uncommon in proper *prima facie* cases of obviousness.

Of even more interest, it is admitted in the Final Official Action that Morito fails to teach or suggest four more of those claimed steps (i.e., selecting...an area, selecting...a format, showing..., and printing...). See Final Official Action, numbered paragraph 3, page 5. The rejection then continues on to assert that the secondary reference to Korytar does teach those four steps which are admitted to be missing from Morito.

Putting aside the merits of those contentions for the moment, and even assuming *arguendo* that one of ordinary skill in the art would have been motivated to have merged these two references together in the manner asserted in the Final Office Action, the four steps alleged to be found in Morito plus the four steps alleged to be found in Korytar only then result in eight of the ten steps set forth in Appellant's claim 1 combination. That is, two of Appellant's claim 1 method steps are not addressed **at all** in the Final Official Action and are not even alleged to be present in the cited art.

Specifically, those two steps which are not even alleged to be present in the cited art are: (1) "showing, on a monitor associated with the computer the picture that corresponds to the digital image file", and (2) "changing, on the monitor, using a user input device of the computer, at least one colour quantity for the picture of the selected area and/or changing the colour in individual squares".

Accordingly, it is respectfully submitted that a prima facie case of obviousness has not been presented, as a matter of law, relative to Appellant's claim 1 combination. Similar comments apply to Appellant's independent claim 4 and 6 combinations which have similar features that are likewise unaddressed in the Final Office Action.

2. The Scope of the Prior Art Has Not Been Properly Established Or Applied in the Final Rejection

In the Second Official Action issued in the present application on May 29, 2009, the Examiner introduced a secondary reference to Korytar (Artopik) as part of the combination of art which was used to reject the claims, which Korytar reference is still applied against the claims today. Korytar (Artopik) is a website which is identified in the PTO-form 892 attached to the Second Official Action as Korytar, Rastislav, Artopik, <http://www.artopik.rksoft.sk/2002>.

On information and belief, the Examiner did not provide (and has not provided) any copies from this website to indicate which portions of the web site are relevant as alleged prior art against the present application. However the Final Official Action continues to maintain that the website represents a disclosure of four of the ten steps of Appellant's claim 1 combination.

In the last response filed in this application on October 29, 2009, the undersigned pointed out to the Examiner that:

"[t]he website itself indicates that the last edit date was July 28, 2004, which is AFTER the priority date of the present application of February 3, 2004. Since there is no evidence that any or all of the website pages identified in the Official Action were in fact published prior to Applicant's priority date, this information cannot reasonably be considered to be prior art relative to the present application and cannot, therefore, be used in support of a rejection under 35 U.S.C. §103. The mere reference on the website to a copyright date range of "2002-2004" is insufficient to show that the information being relied upon is prior art relative to the present application. Accordingly, reconsideration and withdrawal of this ground of rejection is also respectfully requested for this reason."

A copy of the home page of the Korytar website as of October 29, 2009 is attached hereto. Thus it was unclear which (if any) portion of the Korytar website was prior art relative to the present application.

In response to this position, the Final Official Action takes an interesting stance. Specifically, in numbered paragraph 2 of the Final Official Action on page 2, it is stated that:

"However, with reference to Figure 1 of Korytar, the Artopik website was archived by the Internet Archive WaybackMachine with an archive date of December 10, 2002. Figure 2 of Korytar displays the archived page with Date of last edit of December 8, 2002. This can be verified by entering the following URL into an internet capable browser: <http://artopik.rksoft.sk> in the Web section and then clicking "Take Me Back". There, archived copies of the webpage can be found from as far back as 2002 and 2003."

Again, no copies of any archived web pages were provided to the undersigned to show exactly what the Examiner is (now) relying upon as the alleged teachings of the Korytar website. The undersigned has attempted to verify the information which is now being

relied upon in the Final Official Action but receives only an error message when operating the "Wayback" machine in the manner suggested in the Final Official Action.²

According to Graham v. John Deere, the burden for ascertaining the scope of the prior art falls first on the Office. In the present case, it is respectfully submitted that this burden has not been met at least because:

1. No hard copy data is part of the official record, or has been supplied to Appellant, indicating the exact contents of the alleged prior art which is being applied as the Korytar reference.
2. The Examiner is relying upon an alleged archive of a document which is itself transitory and which (at least at the moment) cannot be accessed and whose authenticity is not established.
3. In any event, it is at least somewhat unclear what (if any) information was published by Korytar prior to the priority date of February 3, 2004 and what information was published after the priority date.

Accordingly, it is also respectfully submitted that a *prima facie* case of obviousness has not been established relative to the claims for this reason as well.

2 The undersigned's client was, apparently, able to access the archived Korytar webpage and, on information and belief, found those archived web pages having dates before the priority date of February 3, 2004 to only describe the bullet items set forth in the attached homepage printed on October 29, 2009.

3. Korytar Also Does Not Teach or Suggest the Missing Elements of Appellant's Claimed Combinations.

Even assuming, strictly *arguendo*, that the scope of the prior art represented by the Korytar website has been sufficiently established to comply with the requirements of Graham v. John Deere and 35 U.S.C. § 103(a), the disclosure of the Korytar does not teach or suggest the claim elements which are admitted to be missing from Morito.

As mentioned in the footnote 2 above, on information and belief, the pre-priority date Korytar web pages at best may have disclosed general information and a list of the following features of the cross-embroidery Artopik program for creating cross-embroidery patterns:

- Maximum embroidery size up to 999 x 999 cross stitches
- Smooth zoom in and zoom out of the pattern
- Faster display
- Colour palette can be edited and saved into a separate file
- Colour palette is saved into a file together with every embroidery
- Statistics – sums of "cross stitches" by individual colours used
- Printed output size can be set
- Automatic printout of the pattern on several pages (if it does not fit one sheet of paper)
 - Colour of individual lines of the grid can be set
 - Pattern printout with small crosses, squares or circles can be selected
 - Black and white printout option, whereas individual colours are replaced with symbols
 - User defined margins
 - Export of a pattern into a graphic file (*.jpg or *.bmp)
 - Import from a graphic file (*.jpg or *.bmp) with an option to define position (the function is fully operational only after registration of the program)

Note that the undersigned is not personally in possession of this information, which he received from his client, and that the foregoing statements regarding the potential

disclosure by Korytar are not admissions of prior art. However these bullet items do match the bullet items found in the version of the web page printed out by the undersigned on October 29, 2009.

However assuming, strictly *arguendo*, that such bullet items do represent the scope of the Korytar pre-priority date disclosure then they, at a minimum, fail to teach or suggest "selecting on the monitor, using a user input device of the computer, an area of the shown picture for which a pattern is to be created", "selecting a format of a bead-inlaid plate", "showing on the monitor a picture of the selected area including the colour determined for the square in each square", "changing on the monitor where a picture of the selected area including the colour determined for the square in each square is shown, using a user input device of the computer, at least one colour quantity for the picture of the selected area and/or changing the colour in individual squares", as set forth among other features, in Appellant's claim 1 combination. Similar comments apply to Appellant's independent claim 4 and 6 combinations. These features are simply not considered by the bullets of Korytar described above.

Accordingly, since Korytar fails to teach or suggest the elements admitted to be missing from Morito, one of ordinary skill in the art would not have been able to reach Appellant's claimed combinations.

4. There Would Have Been No Reason for One of Ordinary Skill in the Art to Have Combined Morito and Korytar To Have Attempted to Reach Appellant's Claimed Combinations

a. Morito and Korytar Are Non-Analogous Art

Morito relates to an apparatus for manufacturing bead-inlaid plates and corresponding methods. Korytar relates to software associated with cross stitch embroidery. These two fields of endeavor are respectfully submitted to be non-analogous for at least the following reasons.

Initially it is noted that bead-inlaid plates belong to the field of play toys for children, whereas cross-stitch embroidery is mainly performed by adults. Secondly, bead-inlaid plates are comprised of rigid elements used for making objects such as heat-protecting mats, whereas cross-stitch embroidery is used for creating decorative textile, i.e. flexible objects.

Furthermore, there is another fundamental difference between creating bead-inlaid plates and cross-stitch embroidery. In creating bead-inlaid plates a very restricted number of colour hues is available, such as 30 different hues as described in the application text. The resulting pattern is created using only these available hues. In cross-stitch embroidery, however, the number of colour hues is very large, e.g. corresponding to the number of colours generally available in computer pictures, such as colours corresponding to a colour depth or resolution of 24 bits.

For at least these reasons, it is submitted that Morito and Korytar are non-analogous relative to one another and would not be considered by one skilled in the art for combination.

It is noted that, in the Final Official Action, the Examiner has commented on this previously presented argument by stating that "the claimed invention, like Artopik is directed toward creating a color pattern to be then printed. The use of a finally printed pattern, be it for a layout for a bead-inlaid plate or cross embroidery, is a conclusive step that does not affect the operations of creating and printing a pattern."

However it is respectfully submitted that this is an over-generalization of the problems being solved by exemplary embodiments of the present invention. When dealing with, for example, such a limited number of colors/hues in the creation of bead-inlaid plates, the manner in which those colors are selected (and the flexibility to change those colors as part of the design process) is particularly important. Among other things, it becomes important in the inlaid-bead art to take into account colors/hues of neighbouring beads in order to, for example, not end up with large fields of beads having the same hue by straight simulation of the hues in the original picture by instead mixing beads of different hues to generate a final output, which concern is not present when a substantially larger color palette is available, e.g., as in cross-stitch embroidery.

b. Morito Teaches Away From the Modifications Suggested in the Official Action

In addition to the comments and distinctions provided above, it should be appreciated that, in order to arrive at the claimed combinations, the method and apparatus of Morito must be modified to change the automatic process described by Morito into an interactive process. Such a modification would require, for example, that display and printing devices should be added. Also, corresponding software would have to be developed and added, in particular for showing the pattern and allowing it to be changed, e.g. for each bead, and also for allowing printing in a realistic way. It is respectfully submitted that Morito clearly teaches away from such modifications based on its premise that automated and "low skill" processes are desirable.

5. Dependent Claims

The dependent claims are allowable for at least the reasons set forth with respect to the independent claims from which they depend. With respect to dependent claims 2 and 9, the cited patent application to Braun et al. relates to "Sharpening a digital image in accordance with magnification values" and the cited patent application to Niki relates to "Information processing apparatus, consumables stock management system, consumables stock managing method, consumables stock managing program, and

memory medium", are not within the field of the present invention and do not remedy the afore-described deficiencies of Morito and Korytar.

6. The Term "Relatively Low" Is Not Indefinite

Claim 10 stands rejected as allegedly being indefinite since it contains the phrase "relatively low" relating to the number of colours available for beads used in the inlaid-bead plate. The Final Official Action takes the position that this term is indefinite because it "is a relative term which renders the claim indefinite". See, Final Official Action at page 3, paragraph 5.

The Final Official Action continues on to support this conclusion by stating that the term "relatively low" is not defined by the claim, the specification does not provide a statement for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised by the scope of the invention.

The Examiner recognizes, however, that the present application indicates that beads can be provided with a number of colors ranging from 1-30. See page 4, line 7 of the present application. Since integer values do not go lower than one, it is hard to understand why one of ordinary skill in the art would not understand that, for example, a range of 1-30 could be described by the phrase "relatively low". Moreover it is respectfully submitted that relative terms, per se, do not render a claim's scope indefinite.

Conclusions

Accordingly it is respectfully submitted that the rejection of claims 1, 2, and 4-8 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Morito (U.S. Patent Number 6,003,577) in view of Korytar (Artopik), the rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Morito (U.S. Patent Number 6,003,577) in view of Korytar (Artopik) and further in view of Braun et al. (U.S. Patent Publication 2005/0089247 A1), the rejection of claim 9 under 35 U.S.C. § 103(a) as being unpatentable over Morito (U.S. Patent Number 6,003,577) in view of Korytar (Artopik) and further in view of Niki (U.S. Patent Publication 2003/0050873, and the rejection of claim 10 under 35 U.S.C. § 112 as being allegedly indefinite, are improper and should be REVERSED.

Respectfully submitted,
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(viii) **CLAIMS APPENDIX**

1. A method of creating a pattern for a bead-inlaid plate using a computer, comprising the steps of:

- providing a colour picture,
- converting the colour picture to a digital image file suited for electronic processing,
- showing on a monitor associated with the computer the picture that corresponds to the digital image file,
- selecting on the monitor, using a user input device of the computer, an area of the shown picture for which a pattern is to be created,
- selecting a format of a bead-inlaid plate,
- dividing the selected area of the shown picture into a grid of intersecting lines including squares of a uniform size, each of said squares corresponding to a bead on the bead-inlaid plate, so that the grid of intersecting lines also corresponds to the selected format,
- determining according to a predetermined algorithm for each square that colour among colours available for beads which best represents or agrees with the colour of the square,
- showing on the monitor a picture of the selected area including the colour determined for the square in each square,
- changing on the monitor, using a user input device of the computer, at least one colour quantity for the picture of the selected area and/or changing the colour in individual squares, and
- finally printing a pattern including the selected colours for the bead-inlaid plate.

2. A method according to claim 1, wherein the colour quantities include

lightness, colour saturation and colour scale.

3. A method according to claim 1, wherein the steps of selecting format and dividing the selected area include the substeps that an initial format is first selected, that thereupon the selected area is divided according to the initial format, that on the monitor a picture including a grid of intersecting lines drawn according to the initial format is shown, that on the monitor, using a user input device of the computer, the initial format is changed to a changed format, that thereupon the selected area is divided according to the changed format, these substeps being repeated until a desired format has been obtained.

4. A device for forming a pattern for a bead-inlaid plate, comprising a computer including a receiving device for a digital image file suited for electronic processing, the computer including

- a unit for showing on the monitor associated with the computer the picture that corresponds to the digital image file,

- a unit for selecting on the monitor, using one of the user input devices of the computer, an area of the shown picture for which a pattern is to be formed,

- a unit for selecting a format of a bead-inlaid plate,

- a unit for dividing the selected area in the shown picture in a grid of intersecting lines including squares of a uniform size which each correspond to a bead on the bead-inlaid plate, so that the grid of intersecting lines also correspond to the selected format,

- a unit for determining, according to a predetermined algorithm, for each square that colour hue among colour hues available for the beads which best represents or agrees with the colour hue in the square,

- a unit for showing on the monitor a picture of the selected area including the colour determined for each square in each square,

- a unit for selecting on the monitor, using a user input device of the computer, at least one colour quantity for the picture of the selected area and/or changing the colours in individual squares, and

- a unit for finally printing a pattern including the selected colours for the bead-inlaid plate.

5. A method according to claim 1, characterized in that the step of showing on the monitor a picture of the selected area includes that for each square a picture of a bead having the determined colour hue.

6. An interactive method for creating a pattern for a bead-inlaid plate using a computer, comprising the steps of:

converting a color picture to a digital image file which is suitable for electronic processing;

displaying, on a monitor associated with the computer, a picture that corresponds to the digital image file;

selecting, on the monitor using a user input device of the computer, an area of the displayed picture for which a pattern is to be created;

selecting a format of a bead-inlaid plate;

dividing the selected area of the displayed picture into a grid of intersecting lines including squares of a uniform size, each of said squares corresponding to a bead on the bead-inlaid plate, so that the grid of intersecting lines also corresponds to the selected format;

identifying, for each of said squares, a color among those colors available for beads, which best represents a color of the square,

displaying, on the monitor, a picture of the selected area including the colour determined for the square in each square,

modifying, on the monitor using a user input device of the computer, at least one of: a color attribute associated with the picture of the selected area and the color in an individual square, and

printing a pattern including the selected colors for the bead-inlaid plate.

7. The interactive method of claim 6, wherein said step of selecting a format of a bead-inlaid plate further comprises:

selecting a number of beads to be laid in the bead-inlaid plate.

8. The interactive method of claim 7, wherein said step of selecting a number of beads to be laid in the bead-inlaid plate further comprises:

selecting a number of beads to be laid horizontally and a number of beads to be laid vertically.

9. The interactive method of claim 6, wherein said step of printing a pattern further comprises:

printing a picture of said pattern including information associated with a number of beads of each color hue required to fabricate said pattern as a bead-inlaid plate.

10. The method of claim 1, wherein said colours available for beads is a relatively low number of predetermined color hues.

(ix) **EVIDENCE APPENDIX**

None.

(x) **RELATED PROCEEDINGS APPENDIX**

None.